

WHAT IS CLAIMED IS:

1. A process cartridge detachably mountable to a main assembly of an electrophotographic image forming apparatus, said main assembly including an output
5 contact movable between an electrical connecting position and a retracted position retracted from the electrical connecting position, a displaceable member for moving the output contact, and an elastic function member for elastically urging the displaceable member
10 to urge the output contact toward the retracted position away from the electrical connecting position, said process cartridge comprising:

an electrophotographic photosensitive drum;
process means actable on said

15 electrophotographic photosensitive drum;

a movable operation member movable relative to a cartridge frame, wherein when said process cartridge is inserted into the main assembly of the apparatus, said movable operation member is engageable
20 with a fixed engageable member fixed in the main assembly of the apparatus to move relative to the cartridge frame, and is engageable with a displaceable engaging portion of the displaceable member to move the output contact from the retracted position to the
25 electrical connecting position against an elastic force of the elastic function member, after the engagement with the fixed engageable member;

an input electrical contact for receiving a voltage for enabling said process means by engagement with the output contact moved to the electrical connecting position.

5

2. A process cartridge according to Claim 1, further comprising an elastic function member for applying an elastic force to said movable operation member, wherein when said movable operation member is engaged with the fixed engageable member, said movable operation member moves relative to the cartridge frame against an elastic force of said elastic function member.

15

3. A process cartridge according to Claim 1 or 2, wherein said movable operation member includes a first engaging portion engageable with the fixed engageable member and a second engaging portion engageable with the displaceable engaging portion, wherein when said process cartridge is inserted into the main assembly of the apparatus, said first engaging portion of said movable operation member is engaged with the fixed engageable member to move said movable operation member relative to the cartridge frame, and after said first engaging portion is engaged with the fixed engageable member, said second engaging portion is engaged with the displaceable

20

25

engaging portion to moves the output contact from the retracted position to the electrical connecting position.

5 4. A process cartridge according to Claim 3,
wherein said process cartridge is inserted into the
main assembly of said electrophotographic image
forming apparatus, said first engaging portion is
engaged with the fixed engageable member to rotate so
10 that second engaging portion of said movable operation
member is moved to a position for engagement with the
displaceable engaging portion to engage with said
displaceable engaging portion.

15 5. A process cartridge according to Claim 4,
wherein when said second engaging portion is engaged
with the displaceable engaging portion, said movable
operation member is out of engagement with the fixed
engageable member and out of contact therewith.

20 6. A process cartridge according to Claim 5,
wherein said process means includes a charging member
for electrically charging said electrophotographic
photosensitive drum, and said input electrical contact
25 receives from the output contact the voltage for
charging said electrophotographic photosensitive drum.

7. A process cartridge according to Claim 5,
wherein said process means includes a developing
member for developing the electrostatic latent image
formed on said electrophotographic photosensitive
5 drum, and said input electrical contact receives from
the output contact a voltage for developing the
electrostatic latent image.

8. An electrophotographic image forming
10 apparatus including a main assembly and a process
cartridge detachably mounted to the main assembly,
comprising:

the main assembly of said electrophotographic
apparatus including,

15 an output contact movable between an
electrical connecting position and a retracted
position retracted from the electrical connecting
position:

20 a displaceable member for moving the output
contact;

an elastic function member for elastically
urging the displaceable member to urge the output
contact toward the retracted position away from the
electrical connecting position; and

25 a fixed engageable member;

said process cartridge including,

an electrophotographic photosensitive drum;

process means actable on said
electrophotographic photosensitive drum;

an input electrical contact for receiving a
voltage for enabling said process means;

5 a movable operation member movable relative
to a cartridge frame;

wherein when said process cartridge is
inserted into the main assembly of the apparatus, said
movable operation member is engaged with the fixed
10 engageable member to move relative to the cartridge
frame, and is engaged with a displaceable engaging
portion of the displaceable member to move the output
contact from the retracted position to the electrical
connecting position to establish electrical connection
15 between the output contact and said input electrical
contact, after the engagement with the fixed
engageable member.

9. An apparatus according to Claim 8, further
20 comprising an elastic function member for applying an
elastic force the movable operation member, whercin
when said movable operation member is engaged with
said fixed engageable member, said movable operation
member moves relative to said cartridge frame against
25 an elastic force of said elastic function member.

10. An apparatus according to Claim 9, wherein

said movable operation member includes a first
engaging portion engageable with the fixed engageable
member and a second engaging portion engageable with
the displaceable engaging portion, wherein when said
5 process cartridge is inserted into the main assembly
of the apparatus, said first engaging portion of said
movable operation member is engaged with the fixed
engageable member to move said movable operation
member relative to the cartridge frame, and after said
10 first engaging portion is engaged with the fixed
engageable member, said second engaging portion is
engaged with the displaceable engaging portion to
moves the output contact from the retracted position
to the electrical connecting position.

15
11. An apparatus according to Claim 10, wherein
said process cartridge is inserted into the main
assembly of said electrophotographic image forming
apparatus, said first engaging portion is engaged with
20 the fixed engageable member to rotate so that second
engaging portion of said movable operation member is
moved to a position for engagement with the
displaceable engaging portion to engage with said
displaceable engaging portion.

25
12. An apparatus according to Claim 11, wherein
when said second engaging portion is engaged with the

displaceable engaging portion, said movable operation member is out of engagement with the fixed engagable member and out of contact therewith.

5 13. An apparatus according to Claim 12, wherein
the main assembly of said electrophotographic image
forming apparatus includes a voltage source and an
electric circuit, wherein when the output contact is
in the retracted position, the output contact is
10 electrically disconnected with the voltage source, and
when said output contact moves from the retracted
position to the electrical connecting position, the
output contact is electrically connected with the
voltage source through said electric circuit.

15
 14. An apparatus according to Claim 13, wherein
said process means further including a charging member
for electrically charging said electrophotographic
photosensitive drum, and said input electrical contact
20 receives from the output contact the voltage for
charging said electrophotographic photosensitive drum.

 15. An apparatus according to Claim 13, wherein
said process means further including a developing
25 member for developing the electrostatic latent image
formed on said electrophotographic photosensitive
drum, and said input electrical contact receives from

the output contact a voltage for developing the electrostatic latent image.

16. A process cartridge detachably mountable to a
5 main assembly of an electrophotographic image forming apparatus, wherein

a main assembly of electrophotographic image forming apparatus including,

a cartridge mounting portion for detachably
10 mounting said process cartridge;

a fixed engageable member;

an output contact movable between an
electrical connecting position and a retracted
position retracted from the electrical connecting
15 position; and

a displaceable member having a displaceable
engaging portion for moving the output contact,
wherein the displaceable engaging portion is disposed
downstream of the fixed engageable member, and at
20 least a part of said displaceable engaging portion is
overlapped with the fixed engageable member with
respect to a direction in which said process cartridge
is inserted; and

an elastic function member for elastically
25 urging the displaceable member to urge the output
contact toward the retracted position away from the
electrical connecting position;

said process cartridge including,

an electrophotographic photosensitive drum;

process means actable on said

electrophotographic photosensitive drum;

5 a movable operation member movable relative
to a cartridge frame, wherein when said process
cartridge is inserted into the main assembly of the
electrophotographic image forming apparatus, said
movable operation member is engageable with the fixed
10 engageable member to move relative to the cartridge
frame to a position with which said movable operation
member is movable beyond the fixed engageable member
to permit a further insertion of said process
cartridge, and after engagement with the fixed
15 engageable member, said movable operation member is
engageable with the displaceable engaging portion to
push the displaceable engaging portion to move the
output contact from the retracted position to the
electrical connecting position against an elastic
20 force of the elastic function member;

 an input electrical contact for engagement
with the output contact moved to the electrical
connecting position and for receiving the voltage for
enabling said process means.

25

17. A process cartridge according to Claim 16,
further comprising an elastic function member for

applying an elastic force to said movable operation member, wherein when said movable operation member is engaged with the fixed engageable member, said movable operation member moves relative to the cartridge frame against an elastic force of said elastic function member.

18. A process cartridge according to Claim 16 or 17, wherein said movable operation member includes a first engaging portion engageable with the fixed engageable member and a second engaging portion engageable with the displaceable engaging portion, wherein when said process cartridge is inserted into the main assembly of the apparatus, said first engaging portion of said movable operation member is engaged with the fixed engageable member to move said movable operation member relative to the cartridge frame, and after said first engaging portion is engaged with the fixed engageable member, said second engaging portion is engaged with the displaceable engaging portion to moves the output contact from the retracted position to the electrical connecting position.

19. A process cartridge according to Claim 18, wherein said process cartridge is inserted into the main assembly of said electrophotographic image

forming apparatus, said first engaging portion is engaged with the fixed engageable member to rotate so that second engaging portion of said movable operation member is moved to a position for engagement with the
5 displaceable engaging portion to engage with said displaceable engaging portion.

20. A process cartridge according to Claim 19, wherein when said second engaging portion is engaged
10 with the displaceable engaging portion, said movable operation member is out of engagement with the fixed engageable member and out of contact therewith.

21. A process cartridge according to Claim 20,
15 wherein said process means includes a charging member for electrically charging said electrophotographic photosensitive drum, and said input electrical contact receives from the output contact the voltage for charging said electrophotographic photosensitive drum.

20

22. A process cartridge according to Claim 20, wherein said process means includes a developing member for developing the electrostatic latent image formed on said electrophotographic photosensitive
25 drum, and said input electrical contact receives from the output contact a voltage for developing the electrostatic latent image.

23. An electrophotographic image forming apparatus including a main assembly and a process cartridge detachably mountable thereto,

5 the main assembly including,

 a cartridge mounting portion for detachably mounting said process cartridge;

 a fixed engageable member;

 an output contact movable between an
10 electrical connecting position and a retracted position retracted from the electrical connecting position; and

 a displaceable member having a displaceable engaging portion for moving the output contact,
15 wherein the displaceable engaging portion is disposed downstream of the fixed engageable member, and at least a part of said displaceable engaging portion is overlapped with the fixed engageable member with respect to a direction in which said process cartridge
20 is inserted; and

 an elastic function member for elastically urging the displaceable member to urge the output contact toward the retracted position away from the electrical connecting position;

25 said process cartridge including,

 an electrophotographic photosensitive drum;
 process means actable on said

electrophotographic photosensitive drum;

5 a movable operation member movable relative
to a cartridge frame, wherein when said process
cartridge is inserted into the main assembly of the
electrophotographic image forming apparatus, said
movable operation member is engageable with the fixed
engageable member to move relative to the cartridge
frame to a position with which said movable operation
member is movable beyond the fixed engageable member
10 to permit a further insertion of said process
cartridge, and after engagement with the fixed
engageable member, said movable operation member is
engageable with the displaceable engaging portion to
push the displaceable engaging portion to move the
15 output contact from the retracted position to the
electrical connecting position against an elastic
force of the elastic function member;

an input electrical contact for engagement
with the output contact moved to the electrical
20 connecting position and for receiving the voltage for
enabling said process means.

24. An apparatus according to Claim 23, further
comprising an elastic function member for applying an
25 elastic force the movable operation member, wherein
when said movable operation member is engaged with
said fixed engageable member, said movable operation

member moves relative to said cartridge frame against an elastic force of said elastic function member.

25. An apparatus according to Claim 23 or 24,
5 wherein said movable operation member includes a first engaging portion engageable with the fixed engageable member and a second engaging portion engageable with the displaceable engaging portion, wherein when said process cartridge is inserted into the main assembly
10 of the apparatus, said first engaging portion of said movable operation member is engaged with the fixed engageable member to move said movable operation member relative to the cartridge frame, and after said first engaging portion is engaged with the fixed
15 engageable member, said second engaging portion is engaged with the displaceable engaging portion to moves the output contact from the retracted position to the electrical connecting position.

20 26. An apparatus according to Claim 25, wherein said process cartridge is inserted into the main assembly of said electrophotographic image forming apparatus, said first engaging portion is engaged with the fixed engageable member to rotate so that second
25 engaging portion of said movable operation member is moved to a position for engagement with the displaceable engaging portion to engage with said

displaceable engaging portion.

27. An apparatus according to Claim 26, wherein
when said second engaging portion is engaged with the
displaceable engaging portion, said movable operation
5 member is out of engagement with the fixed engageable
member and out of contact therewith.

28. An apparatus according to Claim 27, wherein
10 the main assembly of said electrophotographic image
forming apparatus includes a voltage source and an
electric circuit, wherein when the output contact is
in the retracted position, the output contact is
electrically disconnected with the voltage source, and
15 when said output contact moves from the retracted
position to the electrical connecting position, the
output contact is electrically connected with the
voltage source through said electric circuit.

29. An apparatus according to Claim 28, wherein
20 said process means further including a charging member
for electrically charging said electrophotographic
photosensitive drum, and said input electrical contact
receives from the output contact the voltage for
charging said electrophotographic photosensitive drum.